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Steven I Weisburd Esq  
Dickstein Shapiro Morin & Oshinsky LLP  
1177 Avenue of the Americas- 41st Floor  
New York, NY 10036-2714

EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

12

DATE MAILED: 08/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/591,239

Examiner

Callie E. Shosho

Applicant(s)

HIRANO ET AL.

Art Unit

1714

mf-12

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-9, 11, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-9, 11, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. All outstanding rejection except for those described below are overcome by applicants' amendment filed 8/7/02.

The following office action is non-final, however, due to the new grounds of rejection as set forth in paragraphs 6-13 below. The new grounds of rejection are necessitated by the use of two new references, namely, Iwata et al. (U.S. 6,376,582) published after the mailing date of the previous office action and JP 07124913 cited on applicants' IDS.

Therefore, the finality of the office action mailed 3/13/02 is withdrawn.

### **Double Patenting**

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 6, 8, and 11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,376,582 (Iwata et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Iwata et al. disclose method comprising heat and pressure forming a mixture comprising 35-90% wood fibers that have been subjected to acetylation treatment, wood fibers that have not been subjected to an acetylation treatment, and binder.

The difference between Iwata et al. and the present claimed invention is (a) no disclosure in Iwata et al. of specific type of binder or specific degree of acetylation and (b) present claims are silent with respect to heat and pressure forming.

With respect to difference (a), Iwata et al. disclose the use of binder and acetylated wood fiber, but the claim is silent with respect to the specific type of binder and the degree of acetylation.

However, applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an

invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438,164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to col.3, lines 31-44 of Iwata et al. which disclose the use of polyisocyanate binder resin such as 4,4'-diphenylmethane diisocyanate wherein it is disclosed that such binder is used because it can be applied uniformly to wood fibers and imparts improved strength and to col.2, lines 40-44 of Iwata et al. which disclose that the degree of acetylation of the wood fibers is 10-30% and that the degree of acetylation controls the water resistance and moisture resistance of the wood fiber.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use polyisocyanate binder and wood fibers with 10-30% degree of acetylation in order to produce material with improved strength and suitable water resistance.

With respect to difference (b), while the present claims disclose forming a composite from first wood fiber, second wood fiber, and binder, there is no explicit disclosure that the ingredients are subjected to heat and pressure forming.

On the one hand, in light of the open language of the present claims, i.e. "comprising", it is clear that the method is open to the inclusion of additional steps such as heat and pressure forming. On the other hand, using the specification as a "dictionary" as described above, it is noted that page 8, lines 6-22 of the present specification disclose that in order to form the composite, the wood fibers and the binder are in fact molded under thermal pressure.

In light of the above, it is clear that one of ordinary skill in the art would have arrived at the claimed invention from Iwata et al.

4. Claims 6, 8, and 11 are directed to an invention not patentably distinct from claim 6 of commonly assigned U.S. 6,376,582 (Iwata et al.) Specifically, although the conflicting claims are not identical, they are not patentably distinct for the explanation given in paragraph 3 above.

5. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302).

Commonly assigned U.S. 6,376,582, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78(c) and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

6. Claims 6, 8, and 11 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. 6,376,582 (Iwata et al.).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

For an explanation of the rejection, see paragraph 3 above.

**Claim Rejections - 35 USC § 102**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 6-9, 11, and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwata et al. (U.S. 6,376,582).

Iwata et al. disclose a method comprising binding 35-90% first wood fibers that are 10-30% acetylated and second wood fibers that are not acetylated with polyisocyanate binder such as 4,4'-diphenylmethane diisocyanate to form a composite. It is further disclosed that the first wood elements are acetylated by being brought into contact with liquid or gas that contains acetyl groups. The wood fibers are produced from wood chips and have diameter of 0.1 mm to 1 mm (col.2, lines 16-46, col. 3, lines 11-13 and 26-44, col.4, lines 22-26). It is noted that since the first wood fibers have 10-30% degree of acetylation and second wood fibers are not acetylated, the average degree of acetylation of the composite, i.e. produced by mixing first wood elements and second wood elements, is 5-15%.

In light of the above, it is clear that Iwata et al. anticipate the present claims.



*Claim Rejections - 35 USC § 103*

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 6-9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 61066604 in view of WO 95/05275.

The rejection is adequately set forth in paragraph 9 of the office action mailed 6/22/01, Paper No. 4, and is incorporated here by reference.

11. Claims 6-7, 9, 11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07124913 in view of WO 95/05275.

Pending formal translation and using a machine translation that is attached to this office action, it is noted that JP 07124913 discloses a method comprising binding first wood fibers that are 10-30% acetylated and second wood fibers that are not acetylated with phenolic binder to form a composite. It is further disclosed that the first wood elements are acetylated by being brought into contact with liquid or gas that contains acetyl groups. The wood fibers are produced from wood chips and have diameter of 0.1 mm to 0.7 mm (abstract, paragraphs 8, 12-14, 18, and 21). It is noted that since the first wood fibers have 10-30% degree of acetylation and second wood fibers are not acetylated, the average degree of acetylation of the composite, i.e. produced by mixing first wood elements and second wood elements, is 5-15%.

The difference between JP 07124913 and the present claimed invention is the requirement in the claims of polyisocyanate binder.

WO 95/05275, which is drawn to wood composition, disclose the use of isocyanate resin binder such as MDI, i.e. 4,4-diphenylmethane diisocyanate, in place of conventionally used binders such as phenolic resins (page 6, lines 1-5, page 6, line 23-page 7, line 14, page 9, lines 14-18 and 24-29, and page 10, line 13). The motivation for using isocyanate resin binder is to produce molded wood composition with superior surface qualities (page 1, lines 4-9).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use polyisocyanate binder in the method of JP 07124913 in order to produce ligneous material with superior surface qualities, and thereby arrive at the claimed invention.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07124913 in view of WO 95/05275 as applied to claims 6-7, 9, 11, and 13-14 above, and further in view of JP 61066604.

The difference between JP 07124913 in view of WO 95/05275 and the present claimed invention is the amount of acetylated wood fibers and unacetylated wood fibers.

JP 61066604, which is drawn to method of manufacturing ligneous material, disclose using acetylated wood fibers and unacetylated wood fibers in a ratio of 1:9 to 9:1 in order to produce material with improved decay resistance and strength (page 4, second full paragraph).

In light of the motivation for using acetylated wood fibers and unacetylated wood fibers in specific amount disclosed by JP 61066604 as described above, it therefore would have been obvious to one of ordinary skill in the art to use acetylated wood fibers and unacetylated wood

fibers in such amount in the method of JP 07124913 in order to produce ligneous material with improved decay resistance and strength, and thereby arrive at the claimed invention.

**Response to Arguments**

13. Applicants' arguments filed 8/7/02 have been fully considered but they are not persuasive.

Specifically, applicants argue that JP 61066604 discloses the use of wood chips not wood fibers as presently claimed. However, given that JP 61066604 disclose that the wood chips have average width of approximately 5 mm and thus aspect ratio of 1 which falls within the range of aspect ratio of the presently claimed wood fibers as described on page 3, lines 5-6 of the present specification, it is the examiner's position that the wood chips of JP 61066604 encompass the presently claimed wood fibers.

Thus, JP 61066604 remains a relevant reference against the present claims.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie Shosho

8/21/02

EDWARD J. CAIN  
PRIMARY EXAMINER  
GROUP 1500

